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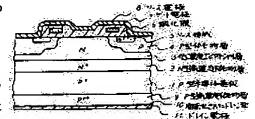
(72)Inventor: USUNAGA YUKIYASU

(54) MANUFACTURE OF VERTICAL TYPE FIELD-EFFECT TRANSISTOR FOR POWER

(57)Abstract:

PURPOSE: To improve an ohmic contact on the drain side, and to increase withstanding voltage and lower ON resistance while enhancing productivity by forming a high-concentration impurity layer having a different conduction type to semiconductor substrate itself through an ion implantation method or a hot gas diffusion method.

CONSTITUTION: An N-type high-concentration impurity layer 2 is shaped to a P-type semiconductor substrate 1 through a thermal diffusion method or an ion implantation method, a low-concentration epitaxial layer is formed, a P-type high-concentration impurity layer 9 is shaped on another surface of the P-type semiconductor substrate, and source and gate regions, a P-type impurity layer 4, an N-type impurity layer 5, an oxide film 6 gate electrodes 7 and a source electrode 8 are formed to the epitaxial layer in a self-alignment manner. The surface of the P-type high-concentration impurity layer 9 is roughened, and a roughened drain surface 10 and a drain electrode 11 are shaped.



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